

What is claimed is:

1. A method for reducing autogenous shrinkage in ultra high-strength concrete in the blending of ultra high-strength concrete with a compression strength in excess of 100 N/mm², comprising the steps of:
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replacing 30 vol.% or less of coarse aggregate with artificial lightweight aggregate, and

blending in a expansive additive in the amount of 30 kg/m³ of concrete and/or a shrinkage reducing agent in the amount of 4 wt.% or less per
10 unit weight of binder, and thereby

bringing the amount of autogenous shrinkage at a curing age of 91 days to 0-600 $\mu\text{m}/\text{m}$.

2. The method for reducing autogenous shrinkage in ultra high-strength concrete according to claim 1, wherein the artificial lightweight aggregate used has water absorption of 5% or greater and 20% or less, a collapse load of 1000–2000 N and a bone-dry density of 1.4–2.0 g/cm³.
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3. The method for reducing autogenous shrinkage in ultra high-strength concrete according to claim 1 or claim 2, further comprising a step of blending into the ultra high-strength concrete at least one of: a water reducing agent, a high-performance water reducing agent, an air-entraining and water reducing agent or a high-performance air-entraining and water-reducing agent according to JIS A 6204, “Chemical Admixtures for Concrete.”
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4. The method for reducing autogenous shrinkage in ultra high-strength concrete according to any of claims 1, 2 or 3, wherein the ratio of water to binder including cement (the water-binder ratio) is 10–25% and the amount of coarse aggregate is 0–400 L/m³.
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